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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,619	07/30/2003	Masaya Okamoto	040894-5946	6129

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MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER	
BRASE, SANDRA L	

ART UNIT	PAPER NUMBER
2852	

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/629,619	OKAMOTO ET AL.	
	Examiner	Art Unit	
	Sandra L. Brase	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 7, 8, 11-15 and 17-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukao et al. (US 6,445,900) in view of Kasahara et al. (US 5,585,598).

4. Fukao et al. (...900) disclose an image forming apparatus comprising: an image carrier (100); an electrostatic latent image forming unit for forming an electrostatic latent image on the image carrier (figure 2); a developing device (401) for developing an electrostatic latent image

formed on the image carrier and which is contacted with respect to the image carrier along a predetermined weight direction; and a contacting unit (501), which is an intermediate transfer member that is part of a transferring unit and which is contacted with respect to the image carrier in a wrap shape (figure 2), wherein the developing device contacts the image carrier in a weight direction which is intersected with the wrap-shaped contact range by the intermediate transfer member (figure 2). The contacting unit is provided on the downstream side of a pivotal rotation direction of the image carrier with respect to the first contacting unit (figure 2). The intermediate transfer member (501) temporarily holds thereon a toner image formed on the image carrier by a developing agent carrier (col. 4, lines 42-45; and figure 2). An eccentricity of the image carrier is suppressed by both the intermediate transfer member and the developing device (figure 2). The developing unit further includes a plurality of developing rollers (401, 402, 403, 404), which are developing agent carriers, provided along a circumferential direction thereof in order to develop the electrostatic latent image formed by the electrostatic latent image forming unit to thereby form a toner image, and a desirable developing roller is transported, by pivotal rotation, to a developing position located opposite to the image carrier (col. 3, line 58 – col. 4, line 17; and figure 2), where an extension of a line which connects a center of the image carrier to a center of the desirable developing roller located opposite to the image carrier is positioned within a range where the transferring unit abuts against the image carrier in a wrap shape (figure 2). The desirable developing roller abuts against the image carrier via a predetermined trail, and a direction along which the predetermined member contacts the image carrier via the trail is located within a range where the transferring unit abuts against the image carrier in a wrap shape (figure 2). A method of holding an image carrier comprising the steps of: abutting with respect

to a pivotally rotated image carrier (100) along a predetermined direction so as to contact the image carrier (figure 2); depressing the image carrier via a center shaft of the image carrier in predetermined weight along a direction opposite to the predetermined direction (figure 2); and stably holding the image carrier based upon both the contact made along the predetermined direction and the depression made along the direction opposite to the predetermined direction (figure 2). The contact along the predetermined direction is realized by abutting with respect to the image carrier from a circumferential portion of the image carrier in a wrap shape within a predetermined range so as to depress the image carrier (figure 2). The opposite direction corresponds to such a direction along which the depression is made from the circumferential portion toward the center shaft within a range at the circumferential portion of the image carrier, which is formed by an extension of such a straight line passing through the abutting range in the wrap shape and the center shaft (figure 2). The image carrier is a photosensitive drum having an axial center (col. 3, lines 30-31). However, Fukao et al. (...900) do not disclose that the first contacting unit including the claimed positioning member that is capable of depressing the image carrier and maintaining a distance between a developing agent carrier and an image carrier. Kasahara et al. (...598) disclose a developing device including a positioning member (116) that contacts and presses an image carrier in a weight direction, where the positioning member depresses the image carrier in a weight direction and the positioning member is capable of maintaining a constant distance between the image carrier and a developing agent carrier for developing a latent image formed on the image carrier (col. 7, lines 20-29). The positioning member is placed at the ends of a developing agent carrier and hence moves in the same trail as the developing agent carrier (figure 10). The positioning member is a tracking member and is

provided on a circumference of each of a plurality of developing agent carriers (110Y, 110M, 110C and 110Bk), and is capable of maintaining a distance between a specific developing agent carrier and the image carrier when the developing device is pivotally rotated and thus the specific developing agent carrier is located opposite to the image carrier (figures 1, 2, 9 and 10; and col. 7, lines 15-38). The positioning member depresses the image carrier along a predetermined direction when positioning of the developing agent carrier for executing the developing operation is carried out with respect to the image carrier (figures 1 and 2). The positioning member is contacted to the image carrier at a non-image forming portion (figure 9). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed positioning member, as disclosed by Kasahara et al. (...598), so as to contact with and depress the image carrier and to maintain a desired developing gap with an developing agent carrier to form a toner image.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukao et al. (US 6,445,900) in view of Kasahara et al. (US 5,585,598) as applied to claim 1 above, and further in view of Kuriyama et al. (US 6,072,976) and Oohara et al. (US 6,760,564).

6. Fukao et al. (...900) in view of Kasahara et al. (...598) disclose the features mentioned previously, and Fukao et al. (...900) disclose the second contact member is an intermediate transfer belt and is contacted to the image carrier under predetermined depression force (figure 2), but do not disclose that the intermediate belt is elastic and is followed by receiving driving force produced from the image carrier. Kuriyama et al. (...976) disclose an image forming apparatus including an intermediate transfer belt, where the belt is elastic (abstract; and col. 7,

lines 4-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the intermediate transfer belt be elastic, as disclosed by Kuriyama et al. (...976), since such an elastic belt obtains high quality images. Oohara et al. (...564) disclose an intermediate belt is followed by receiving a driving force from an image carrier (col. 4, lines 29-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the intermediate transfer belt followed by receiving driving force produced from the image carrier, as disclosed by Oohara et al. (...564), since it is well known in the art to have an image carrier drive an intermediate transfer member.

7. Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukao et al. (US 6,445,900) in view of Kasahara et al. (US 5,585,598) as applied to claims 8 and 14 above, and further in view of Kuriyama et al. (US 6,072,976).

8. Fukao et al. (...900) in view of Kasahara et al. (...598) disclose the features mentioned previously, and Fukao et al. (...900) disclose the intermediate transfer member is a belt (figure 2), but do not disclose the intermediate belt is elastic. Kuriyama et al. (...976) disclose an image forming apparatus including an intermediate transfer belt, where the belt is elastic (abstract; and col. 7, lines 4-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the intermediate transfer belt be elastic, as disclosed by Kuriyama et al. (...976), since such an elastic belt obtains high quality images.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukao et al. (US 6,445,900) in view of Kasahara et al. (US 5,585,598) and Kuriyama et al. (US 6,760,564) as applied to claim 9 above, and further in view of Oohara et al. (US 6,072,976).

10. Fukao et al. (...900) in view of Kasahara et al. (...598) and Kuriyama et al. (...976).disclose the features mentioned previously, but do not disclose the intermediate transfer member is followed by receiving a driving force produced from the image carrier. Oohara et al. (...564) disclose an intermediate belt is followed by receiving a driving force from an image carrier (col. 4, lines 29-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the intermediate transfer belt followed by receiving driving force produced from the image carrier, as disclosed by Oohara et al. (...564), since it is well known in the art to have an image carrier drive an intermediate transfer member.

Response to Arguments

11. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant is to note that Kasahara et al. (US 5,585,598) disclose the claimed positioning device that is located coaxially with the developer roller

Final Rejection

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra L. Brase whose telephone number is (571) 272-2131. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley, can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sandra L. Brase
Primary Examiner
Art Unit 2852

February 18, 2005